6.4 AIRSPACE

6.4.1 Affected Environment

The affected airspace environment is described below in terms of its principal attributes, namely controlled and uncontrolled airspace, special use airspace, military training routes, en route airways, airports and airfields, and air traffic control. Jet routes, all above 18,000 feet (5,486.4 meters), are well above the activities proposed and thus are not considered as part of the ROI. The maximum height of each FTI antenna will be 100 feet (33 meters) or the FAA-approved height, whichever is lower. Prior to final design, the Army will coordinate with FAA to ensure that each antenna does not obstruct air navigation, including approach and departure clearance near any runway or airfield.

Controlled and Uncontrolled Airspace

The airspace in the DMR ROI is composed of Class G (uncontrolled) airspace from the surface to a ceiling of 1,200 feet (365.8 meters) and Class E (controlled) airspace above 1,200 feet (365.8), with the exception of the special use airspace discussed below. Appendix F provides a full definition of the different classes of airspace and an explanatory diagram.

Special Use Airspace

The R-3110 B & C restricted area lies to the south of Dillingham Airfield. Just north of the airfield, three nautical miles off the north shore of O'ahu, is the W-189 warning area. (The effective altitudes, time of use, and controlling agencies for these special use airspace areas are given in Table 6-9). During the published hours of use, the agency using the airspace is responsible for controlling all military activity within a restricted area and determining that its perimeters are not violated. When the airspace is inactive, the using agency releases it back to the controlling agency or center, and, in effect, the airspace is no longer restricted.

Military Training Routes

There are no formal, published military training routes in the DMR airspace ROI.

Table 6-9
Special Use Airspace in the Dillingham Military Reservation Region of Influence

Number/Name	Effective Altitude (in feet)	Time of Use	Controlling Agency
R-3110B	9,000 to 19,000[1] (2,743 to 5,791 meters)	Intermittent[2]	Honolulu ARTCC
R-3110C	To 9,000[1] (To 2,743 meters)	Intermittent[2]	Honolulu ARTCC
W-189	To Unlimited	0700-2200 Monday-Friday 0800-1600 Saturday-Sunday	Honolulu CERAP

Source: NACO 2002
Notes:
ARTCC = Air traffic control center

[1]To but not including the indicated altitude
[2]By notice to airmen (NOTAM)

En Route Airways

No low altitude en route airways enter or transect the ROI, but general aviation aircraft use the airspace in the ROI. This includes all civil aviations operations, other than scheduled air services and unscheduled air transport for hire.

Airports and Airfields

Dillingham Airfield is the only airport in the airspace ROI. The area around Dillingham Airfield on the north shore of O'ahu is indicated on aeronautical charts as a glider operating area (NACO 2002). In addition, Dillingham Airfield is a center for skydiving and for vintage airplane and aerobatic flights. The airfield has an average of 167 takeoffs and landings per day, 97 percent local general aviation and 3 percent military (AirNav.Com 2002).

Dillingham Airfield is a joint-use military/civil airfield, portions of which have been leased to the State of Hawai'i Department of Transportation. The lease only allows civil operations during daylight hours; night operation is reserved for military operations. The Army can close the airfield for daytime military operations with prior notification to the State of Hawai'i Department of Transportation.

Air Traffic Control

Air traffic in the ROI is managed by the Honolulu Control Facility. Dillingham Airfield does not have a control tower.

6.4.2 Environmental Consequences

This section addresses the environmental consequences of the Proposed Action and No Action on airspace.

Summary of Impacts

The Proposed Action, Reduced Land Acquisition, and No Action alternatives would have no impacts on DMR airspace ROI. Table 6-10 summarizes the airspace impact issues at DMR.

Proposed Action (Preferred Alternative)

No Impacts

Reduction in Navigable Airspace. There would be no requirement for new or modified special use airspace to accommodate the Proposed Action nor any requirement for the imposition of any flight restrictions, thus no reduction in the ROI's navigable airspace.

New or Modified Special Use Airspace. The proposed UAV flights would normally be conducted within the R-3109 and R-3110 restricted area complex south of DMR or within the W-189 warning area off the northern coast of O'ahu; thus, the UAV flights would use existing special use airspace. Although the nature and intensity of utilization varies over time and by individual special use airspace area, the proposed UAV flights represent precisely the kinds of activities that the special use airspace was created for. Restricted areas contain airspace within which the flight of aircraft, while not wholly prohibited, is subject to restrictions. Activities within these areas must be confined because of their nature or limitations imposed on aircraft operations that are

Table 6-10
Summary of Potential Airspace Impacts at DMR

Impact Issues	Proposed Action	Reduced Land Acquisition	No Action
Reduction in navigable airspace	○	○	○
New-modified special use airspace	○	○	○
Change to a military training route	○	○	○
Change in en route airways or IFR procedure	○	○	○
Restriction of access to airport/airfield	○	○	○
Obstruction to air navigation	○	○	○
Aviation safety	○	○	○

In cases when there would be both beneficial and adverse impacts, both are shown on this table. Mitigation measures would only apply to adverse impacts.

LEGEND:

⊗ = Significant
⊘ = Significant but mitigable to less than significant
⊙ = Less than significant
○ = No impact
\+ = Beneficial impact
N/A = Not applicable

not part of these activities, or both. Warning areas contain activity that may be hazardous to nonparticipating aircraft, and pilots are warned of the potential danger and must abide by the operating rules of Federal Aviation Regulations, Part 91. As such, the UAV flights would not represent an adverse impact on special use airspace and would not conflict with any airspace plans, policies, or controls. UAV flights are also addressed under aviation safety.

Change to a Military Training Route. There are no published military training routes in the ROI, and no new aircraft activity is proposed at DMR. Consequently, no changes to military training routes would result.

Change in En Route Airways, or IFR Procedures. There are no low altitude en route airways in the DMR airspace ROI, and no new aircraft activity is proposed at DMR. Consequently, no changes to existing or planned IFR minimum flight altitude, published or special instrument procedure, or IFR departure procedures would be required, and VFR operations would not be required to change from a regular flight course or altitude.

Restriction of Access to Airports/Airfields. With no new aircraft activity associated with the Proposed Action, access to, or the use of, airports/airfields available for public use, would not be affected, and commercial or private airport/airfield arrival and departure traffic flows would not be affected.

Obstruction to Air Navigation. Construction of two 42-foot (12.8-meter) FTI antenna support structures (Dillingham ARPT and Dillingham P1, Figure 2-7) along the road to DMR would

be well below the 500-foot (152.4 meter) above ground level threshold for an obstruction to air navigation specified by the FAA (FAA 2001). The antenna support structures would also be at sufficient distance from the Dillingham Airfield runway to be well below the civilian and military airport imaginary surface thresholds (FAA 2001) and thus would not constitute an obstruction to air navigation. Construction and operation of Dillingham Trail would have no impacts on airspace.

Aviation Safety. With no new aircraft activity proposed, no new aviation safety issues, and no adverse impacts on public health and safety are anticipated. The strict procedures and rules in place governing flight operations in both controlled/uncontrolled navigable airspace and special use airspace, coupled with the Army's excellent aviation safety record in Hawai'i make future adverse impacts on public health and safety extremely unlikely.

For those UAV flights that could not be contained wholly within restricted area or warning areas, their operations would be conducted in accordance with well-defined FAA procedures for remotely operated aircraft. At least 60 days before UAV operations, the FAA regional office in Honolulu would have to approve the UAV flights, which would be contingent on the Army demonstrating that the flights would be as safe as those for manned aircraft. Methods include radar observation, forward or side-looking cameras, electronic detection systems, observation from one or more ground sites, or a combination thereof (FAA 2001). In addition, coordination, communications, route and altitude procedures, and lost link/mission abort procedures would all have to be identified. Authorized UAV flights and the other proposed training activities at DMR would have no adverse impact on aviation safety and thus public health and safety.

Reduced Land Acquisition Alternative

The impacts associated with RLA would be identical to those described for the Proposed Action.

No Action Alternative

No Impacts

Continued support for current force training at DMR would have no impacts on controlled and uncontrolled navigable airspace, special use airspace, military training routes, en route airways, or airports/airfields and would not create obstructions to air navigation in the airspace ROI. Existing conditions would continue under No Action. Under the status quo of No Action, there would be no impacts because none of the factors considered in determining impacts apply.